

XI. NOTES ON SOME INDIAN APHIDES

By P. VAN DER GOOT, *Salatiga (Java)*.

During the latter half of 1916, I had the pleasure through the courtesy of Mr. F. H. Gravely of receiving from the Indian Museum at Calcutta a new lot of Indian Aphides, in all 27 tubes, most of them collected in the Himalayas. Amongst them were several apparently new species, the descriptions of which are given in the following pages, together with a list of the remaining species contained in the collection.

Macrosiphum gravelii, sp. nov.

Apterous viviparous female.

Measurements.

Length of body	..	..	3.95 mm.
Breadth of body	..	..	1.85 ,,
Length of antennae	..	..	4.05 ,,
Length of siphunculi	..	..	1.25 ,,
Length of cauda	..	..	0.68 ,,

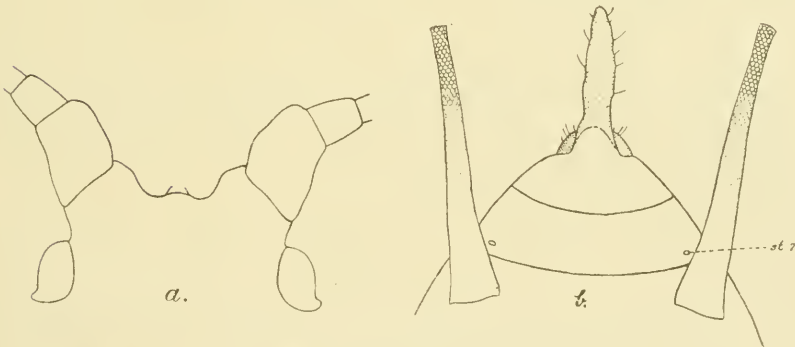


FIG. 1.—*Macrosiphum gravelii*, sp. nov.

a. Head of apterous female (dorsal view). $\times 65$.

b. Hind part of abdomen of apterous female (dorsal view). $\times 35$.

Colour.—Body light yellow or light brownish. Eyes red. Antennae light yellowish-brown, the last three joints brownish-black. Legs yellowish-white, tarsus black. Siphunculi dark brown. Cauda light yellow. (Notes from specimen in alcohol).

Morphological characters.—Body elongate-ovate, slightly arched; the dorsum with transverse rows of very short spiny hairs.

Antennae slightly longer than the body; relative lengths of the five last antennal joints about as: 59. 52. 40. 10. 53. The third joint bears on its basal fourth some 3-5 circular sensoriae. Frontal tubercles well developed, not gibbous or protruding on the innerside: frons slightly arched.

Rostrum reaching to the second pair of coxae.

Siphunculi very long, thin, cylindrical, but distinctly expanded towards the base; the apex with a distinct reticulation, the remainder very faintly imbricated. Cauda elongate, ensiform, about half as long as the cornicles.

Legs long and thin, with small but strong spiny hairs. (Described from numerous wingless specimens).

Food-plant unknown.

Locality.—Soom (Darjiling district), 4,000—5,000 feet, 16-vi-1914 (*F. H. Gravely*).

Types in the collection of the Indian Museum, Calcutta; No. 5597/H. 1.

Rhopalosiphum indicum, v. d. G.

Alate viviparous female.

Measurements.

Length of body	..	..	4.70 mm.
Breadth of body	..	..	2.25 ,,
Length of antennae	..	..	4.85 ,,
Length of siphunculi	..	..	1.00 ,,
Expanse of wings	..	..	13.50 ,,
Length of cauda	..	..	0.43 ,,

Colour.—Head and thorax yellowish-brown; abdomen dirty yellowish. Eyes and antennae black. Legs black, base of femur light yellow. Siphunculi dark brown. Cauda light yellowish. Pterostigma of forewing and all veins with a brownish tinge. (Notes from specimen in alcohol).

Morphological characters.—Body broadly ovate, nearly naked.

Antennae a little longer than the body; relative lengths of the five last antennal joints about as: 60. 42. 33. 12. 65. The third joint bears on its whole length some 65 small circular sensoriae; the fourth joint shows from 0-3 sensoriae. Frontal tubercles small, slightly protruding on the inner side.

Rostrum reaching to the second pair of coxae.

Siphunculi moderately long, thick, only slightly swollen in the middle but considerably constricted at the apex, with a distinct reticulation at the tip. Cauda club-shaped, about half as long as the cornicles.

Wings with normal venation; the second fork of media 1 fairly long. Hooking-hairs 4 in number. (Described from 3 partly damaged winged females, in separate tubes).

Food-plant unknown.

Localities.—Birch Hill (Darjiling district), 6,000—7,000 feet, 1-vii-1914 (*Carmichael* coll.); Soom to Birch Hill (Darjiling distr.), 5,000—6,000 feet, 2-vii-1914 (*Carmichael* coll.); Soom to Darjiling (East Himalayas), 4,500—7,000 feet, 14-vi-1914 (*F. H. Gravely*).

Types in the collection of the Indian Museum, Calcutta; Nos. 5595/H. I., 5598/H. I., 5602/H. I.

I have little hesitation in considering the winged forms described above, apparently caught on the wing, to be identical with the wingless specimen I described in an earlier paper on Indian Aphides (*Rec. Ind. Mus.*, vol. XII, 1916, pp. 1—5).

The reticulation of the cornicles is very rare in *Rhopalosiphum*, the only species showing this character being *Rh. aconiti*, v. d. G.

Rhopalosiphum vagans, sp. nov.

Alate viviparous female.

Measurements.

Length of body	..	..	2.60 mm.
Breadth of body	..	..	1.08 ,,
Length of antennae	..	..	3.15 ,,
Length of siphunculi	..	..	0.54 ,,
Expanse of wings	..	..	7.90 ,,
Length of cauda	..	..	0.25 ,,

Colour.—Head and thorax black, abdomen brownish. Eyes dark. Antennae black. Legs yellowish; tarsus, tip of tibia and femur (except the base) blackish. Siphunculi dark brown. Cauda darkish. Pterostigma of forewings brownish. (Notes from specimen in alcohol).

Morphological characters.—Body nearly naked, without any lateral tubercles.

Antennae distinctly longer than the body; relative lengths of the five last antennal joints about as: 34. 28. 21. 9. 35. The third antennal joint bears from 21—31 circular sensoriae on nearly its whole length. Frontal tubercles fairly small, protruding on the inner side, with a few short hairs.

Rostrum reaching to the second pair of coxae.

Siphunculi moderately long and thin, distinctly swollen, with the surface quite smooth. Cauda ensiform, about half as long as the cornicles.

Wings with normal venation; the second fork of media 1 moderately large. Hooking-hairs 3 in number.

Legs long and thin, with a few short spines. (Described from a single winged female).

Food-plant unknown.

Locality.—Soom to Darjiling, 4,500—7,000 feet, 16-vi-1914 (*F. H. Gravely*).

Type in the collection of the Indian Museum, Calcutta; No. 5600/H. I.

Trichosiphum dubium, sp. nov.*Apterous viviparous female.**Measurements.*

Length of body	..	..	2.88 mm.
Breadth of body	..	..	1.62 ,,
Length of antennae	..	..	1.26 ,,
Length of siphunculi	..	..	0.76 ,,

Colour.—Body dirty yellowish. Eyes red. Antennae light yellow, with blackish apex. Legs light yellowish-brown. Siphunculi dark brown. Cauda light brownish. (Notes from specimen in alcohol).

Morphological characters.—Body broad ovate; the whole dorsum covered with numerous strong, moderately long spines, which are always simple at the apex.

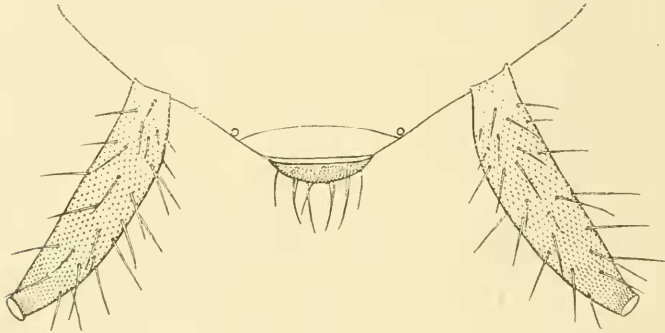


FIG. 2.—*Trichosiphum dubium*, sp. nov.
Hind part of abdomen of apterous female (dorsal view). $\times 60$.

Antennae less than half as long as the body, with a few long spines, relative lengths of the five last joints about as: 29. 9. 13. 11. 24. Primary sensoriae without hair-rim.

Rostrum long, reaching to the third pair of coxae.

Siphunculi moderately short, thick, distinctly broadest towards the middle, with many fairly long bristles; the integument covered with numerous "spinule-rows." Cauda obsolete; the last abdominal segment broadly rounded, not prolonged into a distinct small point. Rudimentary gonapophyses very close together, with a few short hairs; their number not distinct, apparently 3.

Legs slender, with some long hairs. (Described from 4 apterous females, together with numerous larvae and a few nymphs).

Food-plant unknown.

Locality.—Birch Hill (Darjiling district), 6,000—7,000 feet, 30-vi-1914 (Carmichael coll.).

Types in the collection of the Indian Museum, Calcutta No. 5590/H. 1.

The species described above shows much resemblance to the genus *Greenidea*, Schout., especially by the broad body and the short cornicles. The absence of an acute point to the last abdominal segment, however, necessitates it being placed in *Trichosiphum* (Perg.) v. d. G.

***Trichosiphum montanum*, sp. nov.**

Alate viviparous female.

Measurements.

Length of body	..	..	3.05 mm.
Breadth of body	..	..	1.15 ,,
Length of siphunculi	..	..	1.98 ,,
Expanse of wings	..	..	8.10 ,,

Colour.—Head and thorax dark brown; abdomen brownish-yellow. Eyes red (?). Antennae blackish. Legs light yellow,

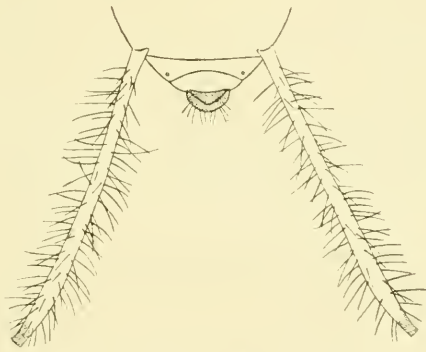


FIG. 3.—*Trichosiphum montanum*, sp. nov.
Hind part of abdomen of alate female (dorsal view). × 25.

tarsus and tibia dark brown. Siphunculi dark brown. Cauda brown. Pterostigma of forewings brown. (Notes from specimen in alcohol).

Morphological characters:—Body elongate ovate; head, thorax and margin of abdomen with long and fine hairs, the dorsum of the abdomen with shorter hairs.

Antennae broken off in the specimen examined. The third antennal joint bears some 17 sensoriae on its basal three-fourths; the sensoriae are broadly oval, occupying nearly half of the antennal circumference.

Rostrum reaching to the third pair of coxae.

Siphunculi very long, thin, cylindrical, with many long hairs and with distinct "spinule-rows" only on the extreme tip. Cauda nearly obsolete, broadly rounded, slightly conical.

Wings with normal *Trichosiphum* venation. Hooking-hairs 3-5 in number.

Legs fairly long, the tibia and femur with moderately long and fine hairs. (Described from a single winged female).

Food-plant unknown.

Locality.—Soom to Darjiling, 4,500—7,000 feet, 16-vi-1914 (F. H. Gravely).

Type in the collection of the Indian Museum, Calcutta; No. 6968/H. I.

Although only a single damaged alate female was available, this species is sufficiently distinct from other species of *Trichosiphum* (*Tr. minutum*, v. d. G. and *Tr. querci*, v. d. G.) in the number and distribution of sensoriae on the third antennal joint.

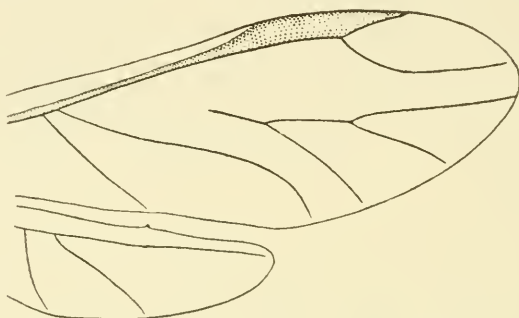


FIG. 4.—*Trichosiphum montanum*, sp. nov.
Fore and hindwing of alate female. ($\times 25$).

Lachnus himalayensis, sp. nov.

Apterous viviparous female.

Measurements.

Length of body	..	..	4.50 mm.
Breadth of body	..	..	2.35 "
Length of antennae	..	..	1.80 "
Siphunculi (diam.)	..	..	0.14 "

Colour.—Body dirty grayish, without blackish spots. Eyes black. Antennae grayish-white. Legs brownish-black. Siphunculi gray, with a brownish top-rim. Cauda light brown. (Notes from specimen in alcohol).

Morphological characters.—Body broad ovate, slightly arched, covered with numerous fine, moderately short hairs.

Antennae less than half as long as the body, with numerous fine hairs; relative lengths of the four last antennal joints about as: 33. 13. 17. 12. Sensoriae are present as follows: III 0. IV 2. V 1+1. VI 1(+4). The primary sensoriae are large, the secondary ones very small and circular.

Rostrum short, reaching to the second pair of coxae.

Siphunculi scarcely elevated above the body, nearly reduced to pores. Cauda obsolete, the last abdominal segment broadly

rounded. Rudimentary gonaphophyses 3 in number, the middle one often double.

Legs moderately long, covered with numerous thin, long hairs.

Alate viviparous female.

Measurements.

Length of body	..	..	4.95 mm.
Breadth of body	..	..	1.98 ,,
Length of antennae	..	..	1.85 ,,
Siphunculi (diam.)	..	..	0.13 ,,
Expanse of wings	..	..	13.15 ,,

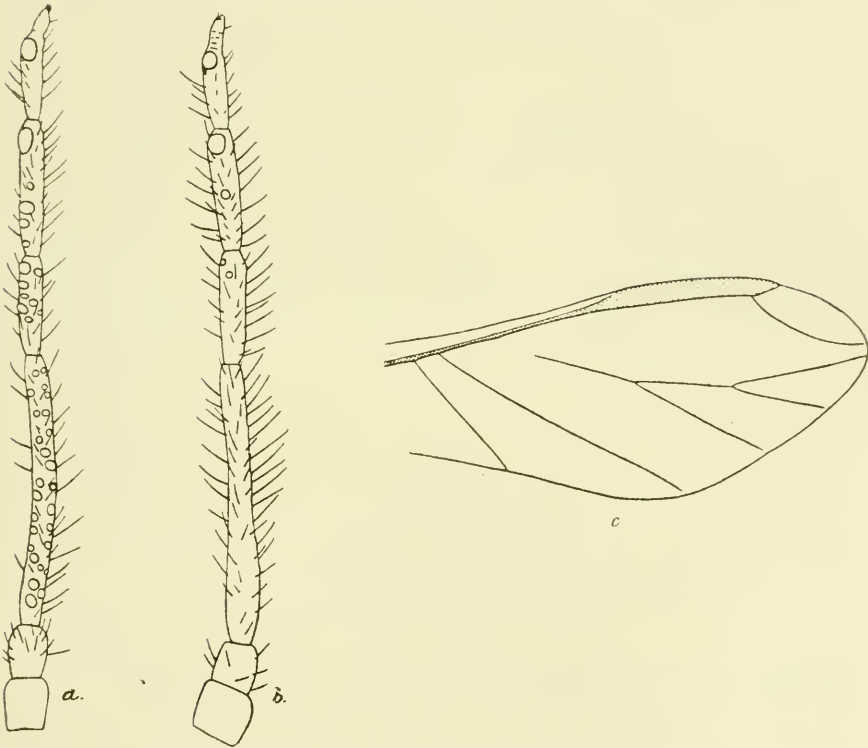


FIG. 5.—*Lachnus himalayensis*, sp. nov.

- a. Antenna of alate female. ($\times 60$).
 b. Antenna of apterous female. ($\times 60$).
 c. Forewing of alate female. ($\times 17$).

Colour.—Body of the same colour as the apterous female; pterostigma of forewings grayish. (Notes from specimen in alcohol).

Morphological characters.—Head, thorax and abdomen covered with numerous, fine, moderately short hairs.

Antennae less than half as long as the body; relative lengths of the four last antennal joints about as: 33. 12. 16. 13. Sensoriae are present as follows: III 45. IV 10. V 7+1. VI 1(+4). Secondary sensoriae circular, moderately large, tuberculate.

Rostrum, siphunculi, etc., as in the apterous female.

Wings with normal *Lachnus*-venation; media 1 twice forked. Hooking-hairs 6 in number. (Described from a number of wingless and winged females).

Food-plant unknown.

Locality.—Birch Hill (Darjiling District), 6,000—7,000 feet, 6-vii-1914 (*Carmichael* coll.).

Types in the collection of the Indian Museum, Calcutta; No. 5601/H. 1.

The species described above is distinct from all other species of *Lachnus* known to me by the numerous sensoriae on the third antennal joint in the winged female.

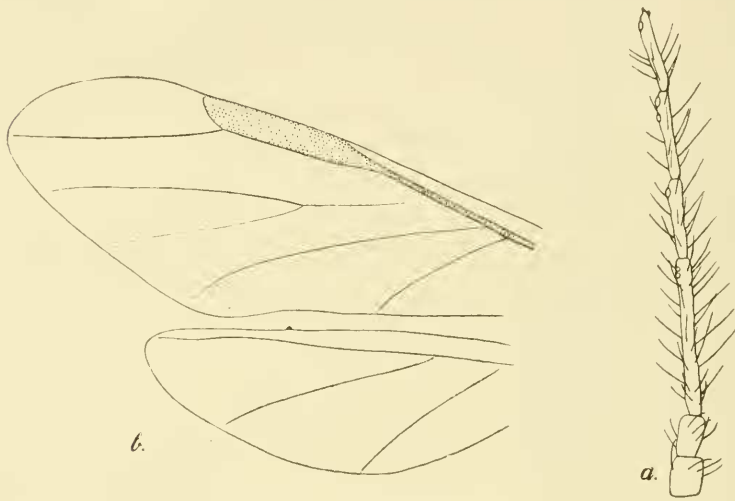


FIG. 6.—*Lachnus similis*, sp. nov.
a. Antenna of alate female. ($\times 45$).
b. Fore and hindwing of alate female. ($\times 15$).

Lachnus similis, sp. nov.

Alate viviparous female.

Measurements.

Length of body	..	..	4.70 mm.
Breadth of body	..	..	2.16 ,,
Length of antennae	..	..	1.65 ,,
Siphunculi (diam.)	..	..	0.13 ,,
Expanse of wings	..	..	16.20 ,,

Colour.—Head and thorax black; abdomen dirty grayish with four longitudinal rows of dark brown spots. Eyes red. Antennae brownish-yellow, the tips of all joints blackish. Legs light yellowish; tarsus, tip of tibia and the femur except the base brownish-black. Siphunculi black. Cauda darkish. Pterostigma of forewings dark brown. (Notes from specimen in alcohol).

Morphological characters.—Body robust, head and thorax with numerous, fine, very long hairs, the abdomen less hairy.

Antennae about $\frac{1}{3}$ the length of the body, with numerous, fine, long hairs; relative lengths of the four last antennal joints about as: 35. 17. 19. 17. Sensoriae are present as follows: III 1—2. IV 1. V 1+1. VI 1 (+4). Secondary sensoriae circular, moderately small, of about the same size as the primary ones.

Rostrum reaching to the third pair of coxae.

Siphunculi broadly conical, but little elevated above the level of the body. Cauda obsolete.

Wings with the typical *Lachnus*-venation; media 1, however, only once forked.

Legs fairly long, with numerous fine hairs. (Described from a single winged female with damaged hind-wings).

Food-plant unknown.

Locality.—Phagu, 9,000 feet, Simla Hills, W. Himalayas; 18-v-1916 (N. Annandale and S. Kemp).

Type in the collection of the Indian Museum, Calcutta; No. 3825/H. 1.

Although described from a single specimen only, I feel little hesitation in considering this a distinct species. It shows some resemblance to *Lachnus pineti*, Koch, but is sufficiently different in the distribution of the sensoriae on the antennal joints, as well as by media 1 being only once forked.

LIST OF REMAINING SPECIES IN THE COLLECTION EXAMINED.

Macrosiphoniella sanborni, Gill.; Calcutta.

Toxoptera aurantii, Boyer; Darjiling, Birch Hill; Calcutta.

Aphis gossypii, Glov. (?); Salt Lakes, Calcutta.

Aphis medicaginis, Koch.; Dinapore, Bihar; Calcutta (maidan).

Aphis malvacearum, Das; Soom (Darjiling District).

Aphis malvae, Koch (?); Calcutta.

Aphis merri, Boyer (= *A. asclepiades*, Pass.); on *Callotropis gigantea* and *Tylophora asmatica* (?); Calcutta; Barkuda Island, Chilka Lake (Madras).

Siphonaphis midis, Fitch; on maize flowers; Siripur, Bihar.

Siphonaphis nymphaeae, L.; on water-hyacinth; Rambha, Madras.

Siphonaphis padi, L. (?); in grass; Paksey, Bengal.

Siphocoryne pseudobrassicae, Davis; Dinapore, Bihar.

Pterocomma populea, Kalt (?); Bhim Tal, W. Himalayas (4,500 feet).